

A NEW TREND e-LEARNING IN EDUCATION SYSTEM

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Abstract - E-learning presents an entirely new learning environment for students, thus requiring a different skill set to be successful. Critical thinking, research, and evaluation skills are growing in importance as students have increasing volumes of information from a variety of sources to sort through. Also, particularly in courses that are entirely electronic, students are much more independent than in the traditional setting. This requires that they be highly motivated and committed to learning, with less social interaction with peers or an instructor. Students in online courses tend to do as well as those in classrooms, but there is higher incidence of withdrawal or incomplete grades. E-learning can be viewed as computer assisted learning, and as pedagogy for student-centered and collaborative learning. Early developments in e-learning focused on computer assisted learning, where part or all of the learning content is delivered digitally. More recently the pedagogical dimension of e-learning has become prominent. E-learning comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked learning or not, serve as specific media to implement the learning process

Key words: E-learning, efficient, computer-based.

1. INTRODUCTION

E-learning according to Markus(2008) can be defined as a learning process created by interaction with digitally delivered content, network-based services and tutoring support. E-learning is any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning), it is a shift from traditional education or training to ICT-based personalized, flexible, individual, self-organized, collaborative learning based on a community of learners, teachers, facilitators, experts. E-learning is the use of Internet technologies to enhance knowledge and performance. E-learning technologies offer learners control over content, learning sequence, pace of learning, time, and often media, allowing them to tailor their experiences to meet their personal learning objectives to manage access to e-learning materials, consensus on technical standardization, and methods for peer review of these resources.

E-learning presents numerous research opportunities for faculty, along with continuing challenges for documenting scholarship. Innovations in e-learning technologies point toward a revolution in education, allowing learning to be individualized (adaptive learning), enhancing learners' interactions with others (collaborative learning), and

transforming the role of the teacher. E-learning refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance.

E-learning is also called Web-based learning, online learning, distributed learning, computer-assisted instruction, or Internet-based learning. Historically, there have been two common e-learning modes: distance learning and computer assisted instruction. Distance learning uses information technologies to deliver instruction to learners who are at remote locations from a central site. Computer assisted instruction (also called computer-based learning and computer based training) uses computers to aid in the delivery of stand-alone multimedia packages for learning and teaching. [1]

2. LITERATURE SURVEY

History of e-learning is as follows:

- In 1960, the University of Illinois initiated a classroom system based in linked computer terminals where students could access informational resources on a particular course while listening to the lectures that were recorded via some form of remotely device like television or audio device.
- In the early 1960s, Stanford University psychology professors Patrick Suppes and Richard C. Atkinson experimented with using computers to teach math and reading to young children in elementary schools in East Palo Alto, California. Stanford's Education Program for Gifted Youth is descended from those early experiments.
- In 1963, Bernard Luskin installed the first computer in a community college for instruction, working with Stanford and others, developed computer assisted instruction.
- Early e-learning systems, based on Computer-Based Learning/Training often attempted to replicate autocratic teaching styles whereby the role of the e-learning system was assumed to be for transferring knowledge, as opposed to systems developed later based on Computer Supported Collaborative Learning (CSCL), which encouraged the shared development of knowledge.
- Computer-based learning made up many early E-learning courses such as those developed by Murray Turoff and Starr Roxanne Hiltz in the 1970s and 80s

at the New Jersey Institute of Technology, and the ones developed at the University of Guelph in Canada. By mid-1980s, accessing course content becomes possible at many college libraries.

- With the advent of World Wide Web in the 1990s, teachers embarked on the method using emerging technologies to employ multi-object oriented sites, which are text-based online virtual reality system, to create course websites along with simple sets instructions for its students. As the Internet becomes popularized, correspondence schools like University of Phoenix became highly interested with the virtual education, setting up a name for it in 1990.
- In 1993, Graziadei described an online computer-delivered lecture, tutorial and assessment project using electronic mail. By 1994, the first online high school had been founded.
- By 1994, CAL Campus presented its first online curriculum as Internet becoming more accessible through major telecommunications networks. CAL Campus is where concepts of online-based school first originated, this allowed to progress real-time classroom instructions and Quantum Link classrooms. With the drastic shift of Internet functionality, multimedia began introducing new schemes of communication; through the invention of webcams, educators can simply record lessons live and upload them on the website page.
- Practitioners such as Harasim (1995) put heavy emphasis on the use of learning networks
- In 1997, Graziadei described criteria for evaluating products and developing technology-based courses include being portable, replicable, scalable, and affordable, and having a high probability of long-term cost-effectiveness.
- Now, there are currently wide varieties of online education that are reachable for colleges, universities and K-12 students. In fact, the National Center for Education Statistics estimate the number of K-12 students enrolled in online distance learning programs increased by 65 percent from 2002 to 2005. This form of high learning allowed for greater flexibility by easing the communication between teacher and student, now teachers received quick lecture feedbacks from their students. The idea of Virtual Education soon became popular and many institutions began following the new norm in the education history.
- The emergence of E-learning is one of the most powerful tools available to the growing need for education. The need to improve access to education opportunities allowed students who desire to pursue their education but are constricted due to the distance of the institution to achieve education through "virtual connection" newly available to them. Online education is rapidly increasing and

becoming as a viable alternative for traditional classrooms. According to a 2008 study conducted by the U.S Department of Education, back in 2006-2007 academic years, about 66% of postsecondary public and private schools began participating in student financial aid programs offered some distance learning courses, record shows only 77% of enrollment in for-credit courses being for those with an online component.

- In 2008, the Council of Europe passed a statement endorsing e-learning's potential to drive equality and education improvements across the Europe.
- Recent studies show that the effectiveness of online instruction is considered equal to that of face-to-face classroom instructions but not as effective as the combination of face-to-face and online methods.[2]

How to make e-learning more effective

Provision of the listed points will improve E-learning effectively.

- Availability of hardware (particularly computers).
- Faster Internet connectivity/improved bandwidth.
- Improved software.
- Appropriate policies favoring e-learning.
- Provision of technical support for e-learning at a range of scales.
- Lower prices for connectivity.
- Availability of reliable electricity.
- Appropriate content in appropriate languages.
- Awareness rising about the value of e-learning.
- Improved training for teachers in e-learning at all levels.

Benefits of e-learning

- E-learning is important for education because it can improve the quality of the learning experience, and extend the reach of every lecturer and tutor.
- E-learning can help remove barriers to achievement, by providing new and creative ways of motivating and engaging pupils and learners of all abilities, enabling and inspiring everyone to attain their educational potential.
- E-learning can support learning by offering differentiated learning, particularly for those who need support in literacy, numeracy and ICT.
- E-learning offers a wide range of tools to enable teachers and learners to be innovative, creative and resourceful in all learning activities. Teachers and learners can easily customize digital learning resources to suit pace and level, appropriate to any learning style and ability.
- E-learning creates on-line communities of practice. The Internet can bring learners, teachers, specialist

communities, experts, practitioners and interest groups together to share ideas and good practice.

- E-learning can provide an individualized learning experience for all learners, including those who are disadvantaged, disabled, exceptionally gifted, have special curriculum or learning needs or who are remote or away from their usual place of learning.
- E-learning can facilitate wider participation and fairer access to further and higher education by creating the opportunity to start learning and to choose courses and support according to the learners' needs.
- E-learning provides personalized learning support through information, advice, and guidance services. It can help learners find the course they need, with a seamless transition to the next stage of their learning, including online application or enrolment and an electronic portfolio of their learning to take with them.
- E-learning provides virtual learning worlds where learners can take part in active and creative learning with others through simulations, role-play, remote control of real-world tools and devices, online master classes, or collaboration with other education providers. [1]

Comparative analysis between Traditional Learning Environment and New Learning Environment

Traditional Learning Environments	New Learning Environments
<ul style="list-style-type: none"> • Teacher centered instruction • Single sense stimulation • Single path progression • Single media 	<ul style="list-style-type: none"> • Student centered instruction • Multisensory stimulation • Multipath progression • Multimedia
<ul style="list-style-type: none"> • Isolated work • Information delivery • Passive learning • Factual, knowledge-based • Reactive response • Isolated, artificial context 	<ul style="list-style-type: none"> • Collaborative work • Information Exchange • Active/exploratory/inquiry based learning • Critical thinking and informed decisions • Proactive / planned action • Authentic, real-world context

Analysis of e-Learning

- Pest problems—rodents chewing through Ethernet wires, insects entering computer housing, bees taking residence in the classroom, to cattle scratching themselves on communications towers
- Theft of and non-malicious (curious) tampering with equipment
- Relative isolation of many rural schools due to long distances and poor roads
- Electrical power: the electrical grid may be over-extended, and have frequent black outs. The power itself is fluctuating with frequent spikes and dips that can destroy computer and other equipment. Solar systems may be expensive to initially purchase, so low power draw by the system is critical.
- Broadband connectivity may be increasing in the near future to major towns and cities. In the meantime and outside urban centers, Internet can be accessed only through expensive satellite systems or cellular networks.
- Computer viruses are often rampant, software is often pirated
- Shortage of trained ICT professionals particularly in rural areas to conduct the required, continual maintenance
- High cost of imported equipment and tools; repair and replacement costs can be high.

Advantages of e-learning

- 24x7 Easy accessibility anywhere any time.
- Stronger understanding because it includes multimedia, quizzes, training part can replayed if something is missed you can replay it.
- It saves time.
- Saves training cost.
- Improve performance of employees.
- Interaction of trainee and trainer can be done online.
- Students may have the option to select learning materials that meets their level of Knowledge and interest
- Develops knowledge of the Internet
- Develops computers skills that will help learners throughout their lives and careers

Disadvantages of e-learning

- Unmotivated learners or those with poor study habits may fall behind.
- Lack of familiar structure and routine may take getting used to Students may feel isolated or miss social interaction.
- Instructor may not always be available on demand.

- Slow or unreliable Internet connections can be frustrating.
- Managing learning software can involve a learning curve.
- Some courses such as traditional hands-on courses can be difficult to simulate.
- Bias towards tech-savvy students over non-technical students.
- Teachers lack of knowledge and experience to manage virtual teacher-student interaction.
- Asynchronous communication hinders fast exchange of question.

Limitations of e-learning

- **Computer literacy and access to equipment:**
One of the big limitations of E-learning that a trainer/student should be computer literate he/she should know computer. If student/trainer doesn't know computer he/she is unable to learn from E-learning method.
- **Some topics are not appropriate for E-learning:**
Topics that require physical exertion and practice, such as sports and public speaking, are covered in e-learning. However, e-Learning can be a useful companion to traditional education for teaching background and technical information.
- **Students themselves can be a limitation to E-learning:**
A student who studies on E-learning program should be self-motivated and discipline because no one is there to say is concentrated on your study.

3. CONCLUSIONS

From this research paper we can conclude that E-learning is growing in training and education sector. More and more companies using E-learning are giving training to their employee also various Universities are providing education through E-learning. It has more advantages than disadvantages like it is cost effective, saves time, 24x7 accesses, learn your own speed, quick answer of any problem etc. E-learning future is very bright it is growing since 1980 till now. All the student and trainer enjoy it and feel comfortable in using it.

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